ractitioner's Docket No	915-007.047
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PATENT

Preliminary Classification:

Proposed Class:

Subclass:

NOTE:

"All applicants are requested to include a preliminary classification on newly filed patent applications. The preliminary classification, preferably class and subclass designations, should be identified in the upper right-hand comer of the letter of transmittal accompanying the application papers, for example 'Proposed Class 2, subclass 129." M.P.E.P. § 601, 7th ed.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Mail Stop PATENT APPLICATION Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

NEW APPLICATION TRANSMITTAL

Transmitted herewith for filing is the patent application of

Inventor(s): Jaako MAUNUKSELA

WARNING: 37 C.F.R.§ 1.41(a)(1) points out:

"(a) A patent is applied for in the name or names of the actual inventor or inventors.

"(1) The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by § 1.63, except as provided for in § 1.53(d)(4) and § 1.63(d). If an oath or declaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53(b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(I) is filed supplying or changing the name or

names of the inventor or inventors.'

For (title):

Pulse Modulation

CERTIFICATION UNDER 37 C.F.R. § 1.10*

(Express Mail label number is mandatory) (Express Mail certification is optional.)

I hereby certify that this New Application Transmittal and the documents referred to as attached therein are being deposited with the United States Postal Service on this date, September 16, 2003, in an envelope as "Express Mail Post Office to Addressee," mailing Label Number EV 252883474 US, addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

> Annemarie Maher (type/or print name of person mailing paper)

Signature of person mailing paper

WARNING:

Certificate of mailing (first class) or facsimile transmission procedures of 37 C.F.R. § 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

WARNING:

Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C.F.R. § 1.10(b).

Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

10/663350 10/663350

1. Type of Application

Th	nis ne	ew application is for a(n)
		(check one applicable item below)
X) Or	iginal (nonprovisional)
	De	esign
		Plant
WARN	ING:	"Do not use this transmittal for a completion in the U.S. of an International Application under 35 U.S.C. § $37(c)(4)$, unless the International Application is being filed as a divisional, continuation or continuation-in-part application.
WARN	ING:	Do not use this transmittal for the filing of a provisional application.
NOTE:	AP and	one of the following 3 items apply, then complete and attach ADDED PAGES FOR NEW PLICATION TRANSMITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED IT A NOTIFICATION IN PARENT APPLICATION OF THE FILING OF THIS CONTINUATION PLICATION.
		Divisional Continuation Continuation-in-part (C-I-P)

2. Benefit of Prior U.S. Application(s) (35 U.S.C. §§ 119(e), 120, or 121)

NOTE: A nonprovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional applications or copending international applications designating the United States of America. In order for a nonprovisional application to claim the benefit of a prior filed copending nonprovisional application or copending international application designating the United States of America, each prior application must name as an inventor at least one inventor named in the later filed nonprovisional application and disclose the named inventor's invention claimed in at least one claim of the later filed nonprovisional application in the manner provided by the first paragraph of 35 U.S.C. § 112. Each prior application must also be:

- (i) An international application entitled to a filing date in accordance with PCT Article 11 and designated the United States of America; or
- (ii) Complete as set forth in § 1.51(b); or
- (iii) Entitled to a filing date as set forth in § 1.53(b) or § 1.53(d) and include the basic filing fee set forth in § 1.16; or
- (iv) Entitled to a filing date as set forth in § 1.53(b) and have paid therein the processing and retention fee set forth in § 1.21(l) within the time period set forth in § 1.53(f).

37 C.F.R. § 1.78(a)(1).

NOTE: If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., or benefit of a prior provisional application is claimed, then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

WARNING: If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. §§ 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. §§ 120,121 or 365(c). (35 U.S.C. § 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. §§ 199, 365(a) or 365(b).) For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20,195, at 20,205.

WARNING:		9:	When the last day of pendency of a provisional application falls on a Saturday, Sunday, or Federal holiday within the District of Columbia, any nonprovisional application claiming benefit of the provisional application must be filed prior to the Saturday, Sunday, or Federal holiday within the District of Columbia. See 37 C.F.R. § 1.78(a)(3).
			The new application being transmitted claims the benefit of prior U.S. application(s). Enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.
3.	Pap	ers	Enclosed
	<u>16</u>	1.19 Pa Pa	quired for filing date under 37 C.F.R. § 1.53(b) (Regular) or 37 C.F.R. § 53 (Design) Application ges of specification ges of claims eets of drawings
	WAF	RNIN	G: DO NOT submit original drawings. A high quality copy of the drawings should be supplied when filing a patent application. The drawings that are submitted to the Office must be on strong, white, smooth, and non-shiny paper and meet the standards according to § 1.84. If corrections to the drawings are necessary, they should be made to the original drawing and a high-quality copy of the corrected original drawing then submitted to the Office. Only one copy is required or desired. For comments on proposed then-new 37 C.F.R. § 1.84, see Notice of March 9, 1988 (1990 O.G. 57-62).
	NOT	E:	"Identifying indicia, if provided, should include the application number or the title of the invention, inventor's name, docket number (if any), and the name and telephone number of a person to call if the Office is unable to match the drawings to the proper application. This information should be placed on the back of each sheet of drawing a minimum distance of 1.5 cm (5/8 inch) down from the top of the page" 37 C.F.R. § 1.84(c)).
			(complete the following, if applicable)
			The enclosed drawing(s) are photograph(s), and there is also attached a "PETITION TO ACCEPT PHOTOGRAPH(S) AS DRAWING(S)." 37 C.F.R. § 1.84(b).
			The enclosed drawing(s) are in color. Three (3) sets of color drawings and a "PETITION TO ACCEPT COLOR DRAWING(S)" are attached. 37 C.F.R. §§ 1.84(a)(2) and 1.84(b).
		☒	formal informal
	В.	Oth	ner Papers Enclosed
	<u>0</u> <u>1</u> <u>0</u>	_Pa	ges of declaration and power of attorney ges of abstract her
4.	Δd	ditio	onal papers enclosed
			nendment to claims
			ncel in this application claims before calculating
	_	the	filing fee. (At least one original independent claim must be retained for ag purposes.)
		bee	d the claims shown on the attached amendment. (Claims added have en numbered consecutively following the highest numbered original ims.)

	ш	Prei	ımın	ary Amendment		
	X	☑ Information Disclosure Statement (37 C.F.R. § 1.98)				
	X	Form PTO-1449 (PTO/SB/08A and 08B)				
	\boxtimes	Cita	tion	· S		
		Dec	lara	tion of Biological Deposit		
		ame	endn	sion of "Sequence Listing," computer readable copy and/or nent pertaining thereto for biotechnology invention containing de and/or amino acid sequence		
				ration of Attorney(s) to Accept and Follow Instructions from entative		
		Spe	cial	Comments		
		Oth	er			
5.	Dec	clara	itior	or oath (including power of attorney)		
that the prior nonprovisional application contains being filed is by all or fewer than all the inventors matter in the application being filed, and a copy application (showing the signature or an indication copy must be accompanied by a statement reques are not inventors of the application being filed. If under § 1.47, then a copy of that declaration is decision granting § 1.47 status or, if a nonsigning		the pg filed for in ication must in ication for side for side for side for for in ication for side for ication for	executed declaration is not required in a continuation or divisional application provided by all or fewer than all the inventors named in the prior application, there is no new the application being filed, and a copy of the executed declaration filed in the prior in (showing the signature or an indication thereon that it was signed) is submitted. The state be accompanied by a statement requesting deletion of the names of person(s) who eventors of the application being filed. If the declaration in the prior application was filed 1.47, then a copy of that declaration must be filed accompanied by a copy of the granting § 1.47 status or, if a nonsigning person under § 1.47 has subsequently joined application, then a copy of the subsequently executed declaration must be filed. See §§ 1.63(d)(1)-(3).			
which it is directed, identify each inventor by full name including family name and a given name, without abbreviation together with any other given name or initia			ation filed to complete an application must be executed, identify the specification to is directed, identify each inventor by full name including family name and at least one me, without abbreviation together with any other given name or initial, and the inpost office address and country or citizenship of each inventor, and state whether the is a sole or joint inventor. 37 C.F.R. § 1.63(a)(1)-(4).			
NOTE:		decl oath appl to § is fil	aration or discarding 1.53	entorship of a nonprovisional application is that inventorship set forth in the oath or in as prescribed by § 1.62, except as provided for in § 1.53(d)(4) and § 1.63(d). If an eclaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional in, the inventorship is that inventorship set forth in the application papers filed pursuant (b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(I) upplying or changing the name or names of the inventor or inventors." 37 C.F.R. § 1.		
			End	closed		
			Exe	ecuted by		
				(check all applicable boxes)		
				inventor(s).		
				legal representative of inventor(s). 37 C.F.R. §§ 1.42 or 1.43.		
			□ inve	joint inventor or person showing a proprietary interest on behalf of entor who refused to sign or cannot be reached.		
				This is the petition required by 37 C.F.R. § 1.47 and the statement required by 37 C.F. R. § 1.47 is also attached. See item 13 below for fee.		
		\boxtimes	Not	Enclosed		

NOT	re:	com Appl may	re the filing is a completion in the U.S. of an International Application or where the bletion of the U.S. application contains subject matter in addition to the International ication, the application may be treated as a continuation or continuation-in-part, as the case be, utilizing ADDED PAGE FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT PRIOR U.S. APPLICATION CLAIMED.
			☐ Application is made by a person authorized under 37 C.F.R. § 1.41(c) on behalf of <i>all</i> the above named inventor(s).
(The	deci	aration or oath, along with the surcharge required by 37 C.F.R. § 1.16(e) can be filed subsequently).
			☐ Showing that the filing is authorized. (not required unless called into question. 37 C.F.R. § 1.41(d))
6.	Inv	ento	orship Statement
WA	RNIN	G:	If the named inventors are each not the inventors of all the claims an explanation, including the ownership of the various claims at the time the last claimed invention was made, should be submitted.
The	e inv	ento	rship for all the claims in this application is:
	X	The	e same.
			or
			the same. An explanation, including the ownership of the various claims he time the last claimed invention was made,
			is submitted.
			will be submitted
7.	Lar	ngua	age
NO	TE:	Eng. of \$	application including a signed oath or declaration may be filed in a language other than lish. An English translation of the non-English language application and the processing fee 130.00 required by 37 C.F.R. § 1.17(k) is required to be filed with the application, or within in time as may be set by the Office. 37 C.F.R. § 1.52(d).
		X	English Non English
			☐ The attached translation includes a statement that the translation is accurate. 37 C.F.R. § 1.52(d).
8.	As	sign	ment
		図	An assignment of the invention toNokia Corporation
			☐ is attached. A separate ☐ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or ☐ FORM PTO 1595 is also attached.
			☑ will follow.
NO	TE:		an assignment is submitted with a new application, send two separate letters-one for the

(New Application Transmittal [4-1] page 5 of 11)

WARNING:					(b)" must be filed when a of April 30, 1993, 1150 OG
					assignment document
				Reel	
9. Certif	ied Copy				
Certifi	ed copy(ies) of applic	cation(s)			
		Annin	No		Filed
Count	гу	Appln.	NO.		Filed
Count	ry	Appln	No.		Filed
from whic	n priority is claimed:				
	is (are) attached.				
NOTE: Tf pa ur ite O	rent U.S. application or ider 35 U.S.C. § 120 is its in 18 on the ADDED PAF PRIOR U.S. APPLICATION (37 C.F.F.	priority for which the International Applicate of entitled to prioriting Section 1997 (CA) CLAIMED. R. § 1.16)	ation from a	m which this a prior foreign	filed directly relates. If any application claims benefit application, then complete MITTAL WHERE BENEFIT
		CLAIMS AS I	FILED		
Number fi	led	Number Extra	-	Rate	Basic Fee 37 C.F.R. § 1.16(a) \$750.00
Total Clai (37 C.F.R	ms . § 1.16(c)) 19 - 20 =	· 0	x	\$18.00 =	
	ent Claims . § 1.16(b)) 3 - 3 =	0	x	\$84.00 =	
	ependent claim(s), C.F.R. § 1.16(d))		+	\$280.00	
	Amendment deleti Fee for extra claim the fees for extra claims	ng multiple-depons is not being pon are not paid on filir	endend aid at t ag, they	cies is encl his time. must be paid	osed. If or the claims canceled by sponse by the Patent and
	rademark Office in any not	ice of fee deficiency			

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	Б.	Ц	(\$310.00 – 37 C.F.R. § 1.16(f))
			Filing Fee Calculation \$
	C.		Plant application
			(\$480.00 - 37 C.F.R. § 1.16(g))
			Filing Fee Calculation \$
11. Sm	all	Entit	y Statement(s)
			ent(s) that this is a filing by a small entity under 37 C.F.R. §§ 1.9 and (are) attached.
WARNIN	G:	whice pates which has divise 1.53 entite application that to the desired control of the des	tus as a small entity must be specifically established in each application or patent in the status is available and desired. Status as a small entity in one application or ant does not affect any other application or patent, including applications or patents the are directly or indirectly dependent upon the application or patent in which the status been established. The refiling of an application under § 1.53 as a continuation, sion, or continuation-in-part (including a continued prosecution application under § 1.61), or the filing of a reissue application requires a new determination as to continued dement to small entity status for the continuing or reissue application. A nonprovisional lication claiming benefit under 35 U.S.C. § 119(e), 120, 121, or 365(c) of a prior ication, or a reissue application may rely on a statement filed in the prior application or epstent if the nonprovisional application or the reissue application includes a reference the statement in the prior application or in the patent or includes a copy of the statement are prior application or in the patent and status as a small entity is still proper and the payment of the small entity basic statutory filing fee will be treated as such a rence for purposes of this section." 37 C.F.R. § 1.28(a)(2).
WARNIN	G:	state	all entity status must not be established when the person or persons signing the ement can unequivocally make the required self-certification." M.P.E.P., § 509.03, 6 th rev. 2, July 1996 (emphasis added).
		_	(complete the following, if applicable)
			Status as a small entity was claimed in prior application
			35 U.S.C. § □ 119(e), □ 120, □ 121, □ 365(c),
			and which status as a small entity is still proper and desired.
			☐ A copy of the statement in the prior application is included.
			Filing Fee Calculation (50% of A , B , or C above)
			\$
NOTE.		are file	xcess of the full fee paid will be refunded if a small entity statement and a refund request ad within 2 months of the date of timely payment of a full fee. The two-month period is tendable under § 1.136. 37 C.F.R. § 1.28(a).
12. Re	que	est fo	or International-Type Search (37 C.F.R. § 1.104(d))
			(complete, if applicable)
			prepare an international-type search report for this application at the nen national examination on the merits takes place.

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13. Fee Payment Being Made at This Time

ΙXΙ	Not	Enclosed	
	X	No filing fee is to be paid at this time. (This and the surcharge required by 37 C.F.R. § 1.16(e) can subsequently.)	be paid
	End	closed	
		Filing fee	\$
		Recording assignment (\$40.00 – 37 C.F.R. § 1.21(h)) (See attached "COVER SHEET FOR ASSIGNMENT ACCOMPANYING NEW APPLICATION.")	\$
		Petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached. (\$130.00 - 37 C.F.R. §§ 1.47 and 1.17(i))	· .
		For processing an application with a specification in a non-English language (\$130.00; 37 C.F.R. §§ 1.52(d) and 1.17(k))	\$
		Processing and retention fee (\$130.00, 37 C.F.R. §§ 1.52(d) and 1.21(l))	\$
		Fee for international-type search report (\$40.00; 37 C.F.R. § 1.21(e))	\$
NOTE:	aba as ti a pr	C.F.R. § 1.21(I) establishes a fee for processing and retaining any ap ndoned for failing to complete the application pursuant to 37 C.F.R. § 1.53(f) he changes to 37 C.F.R. §§ 1.53 and 1.78(a)(1), indicate that in order to obtain U.S. application, either the basic filing fee must be paid, or the procession of § 1.21(I) must be paid, within 1 year from the notification under § 53(f).	and this, as well ain the benefit of
	Tot	tal fees enclosed	\$
14. Me	tho	d of Payment of Fees	
	Atta	ached is a □ check □ money order in the amount of \$	_
	Aut	thorization if hereby made to charge the amount of \$	
		to Deposit Account No	
		to credit card as shown on the attached credit card informauthorization form PTO-2038	mation
□ in		arge any additional fees required by this paper or credit any o manner authorized above. A duplicate of this transmittal is a	
NOTE:		s should be itemized in such a manner that it is clear for which purpose the i.R. § 1.22(b).	fees are paid. 37

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15. Authorization to Charge Additi nal Fees **WARNING:** If no fees are to be paid on filing, the following items should not be completed. **WARNING:** Accurately count claims, especially multiple dependent claims, to avoid unexpected high charges, if extra claim charges are authorized. The Commissioner is hereby authorized to charge the following additional fees by this paper and during the entire pendency of this application to Account No. 37 C.F.R. § 1.16(a), (f), or (g) (filing fees) ☐ 37 C.F.R. § 1.16(b), (c), and (d) (presentation of extra claims) NOTE: Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims canceled by amendment prior to the expiration of the time period set for response by the P.T.O. in any notice of fee deficiency (37 C.F.R. § 1.16(d)), it might be best not to authorize the P.T.O. to charge additional claim fees, except possibly when dealing with amendments after final action. 37 C.F.R. § 1.16(e) (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application) ☐ 37 C.F.R. § 1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a)) ☐ 37 C.F.R. § 1.17 (application processing fees) "...A written request may be submitted in an application that is an authorization to treat any **WARNING:** concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. § 1.136(a)(3). ☐ 37 C.F.R. § 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. § 1.311(b)) NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the Notice of Allowance. 37 C.F.R. § 1.311(b).

NOTE: 37 C.F.R. § 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application . . . prior to paying, or at the time of paying, . . issue fee." From the wording of 37 C.F.R. § 1.28(b), (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.

16. Instructions as to Overpayment

Customer No. 004955

16. Ins	truc	ctions as to Overpayment	
NOTE:	"Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 C.F.R. § 1.26(a).		
		Credit Account No.	
		Refund	
Date:	Sept	etember 16, 2003	MAN
	•	27,550	SIGNATURE OF PRACTITIONER
		03) 261-1234	Alfred A. Fressola
	,	,	(type or print name of practitioner
			Ware, Fressola, Van Der Sluys & Adolphson, LLP
			P.O. (Correspondence) Address
			Building Five, Bradford Green 755 Main Street, P.O. Box 224

Monroe, CT 06468

☐ Incorporation by reference f added pages					
	(check the following item if the application in this transmittal claims the benefit of prior U.S. application(s) (including an international application entering the U.S. stage as a continuation, divisional or C-I-P application) and complete and attach the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.)				
		Plus Added Pages for New Application Transmittal Where Benefit of Prior U.S. Application(s) Claimed Number of pages added			
		Plus Added Pages for Papers Referred to in Item 4 Above			
		Number of pages added			
		Plus added pages deleting names of inventor(s) named in prior application(s) who is/are no longer inventor(s) of the subject matter claimed in this application.			
		Number of pages added			
		Plus "Assignment Cover Letter Accompanying New Application"			
		Number of pages added			
X	Sta	tement Where No Further Pages Added			
		(if no further pages form a part of this Transmittal, then end this Transmittal with this page and check the following item.			
	X	This transmittal ends with this page.			

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